



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

K

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/622,853  | 07/17/2003  | Anthony P. Arnold    | 58724-295125        | 2933             |
| 7590  | 05/13/2004  |                      | EXAMINER            |                  |
| Michael A. DeSanctis<br>FAEGRE & BENSON<br>3200 Wells Fargo Center<br>1700 Lincoln Street<br>Denver, CO 80203 |             |                      | JIANG, CHEN WEN     |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 3744                |                  |
| DATE MAILED: 05/13/2004   |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/622,853             | ARNOLD, ANTHONY P.  |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Chen-Wen Jiang         | 3744                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 17 July 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-15 and 18-20 is/are rejected.
- 7) Claim(s) 16 and 17 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 17 July 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All
  - b) Some \*
  - c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 20030717.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### *Specification*

1. Claim 17 is objected to because of the following informalities: Claim 17 depends on claim 16. It is not clear how to integrated the personal heat control device with a mobile phone or a wristwatch. Appropriate correction is required.

### *Drawings*

2. The drawings are objected to because figures in poor quality and solid black shading (areas) are not permitted (Figs.2-8). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1,2,8,9,10,11,12,13,19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Arnold (U.S. Patent Number 5,970,718).

In regard to claims 1,11,13,19 and 20 Arnold discloses a self-contained, portable heat control device comprising a flexible housing (leather or fabric) 4 configured to accommodate an

Art Unit: 3744

internal DC power supply in compartments 7,8, a cooling surface 2; a heating surface 3 thermally insulated from the cooling surface; and a heat transfer unit 1 configured and disposed to cool the cooling surface and heat the heating surface, the heat transfer unit being accommodated in or on the flexible enclosure 4.

In regard to claims 2 and 12, Arnold discloses the heat transfer unit is a Peltier-effect unit.

In regard to claims 8-10, Arnold discloses the electrical-powering may include one or more batteries, re-chargeable lithium ion batteries or primary thin cell batteries.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3,4,5,6,7,14,15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold (U.S. Patent Number 5,970,718) in view of Lebovec et al. (U.S. Patent Number 4,470,263) or Giblin (U.S. Patent Number 6,438,964).

Arnold discloses a self-contained, portable heat control device comprising a flexible housing (leather or fabric) 4 configured to accommodate an internal DC power supply in compartments 7,8, a cooling surface 2; a heating surface 3 thermally insulated from the cooling surface; and a heat transfer unit 1 configured and disposed to cool the cooling surface and heat the heating surface, the heat transfer unit being accommodated in or on the flexible enclosure 4.

Art Unit: 3744

However, Arnold does not disclose the portable control device is incorporated into a wearable article. Lebovec et al. and Giblin disclose the thermoelectric cooling device can be in head bands, neck bands, arm band, leg band, helmet, sport hat, sport wear and costumes wear, casual wear or occupational wear in the same field of endeavor for the purpose of cooling person. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Arnold with a thermoelectric cooling device incorporated with a wearable article in view of Lebovec et al. and Giblin so as to cool a person.

***Allowable Subject Matter***

7. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pachys (U.S. Patent Number 5,603,932), Johnston (U.S. Patent Number 6,023,932) and Taylor et al. (U.S. Patent Number 6,125,636) are made of record as relevant prior art.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (703) 308-0275. The examiner can normally be reached on Tuesday-Friday from 7:00 to 5:30.

Art Unit: 3744

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Denise Esquivel can be reached on (703) 308-2597. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chen-Wen Jiang  
Primary Examiner

A handwritten signature in black ink, appearing to read "CJW".